

Having described the invention, the following is claimed:

1. In a reprocessor having a circulation system for circulating a liquid sterilant or microbial deactivation fluid through a chamber that forms a part of said circulation system, a water filtration system for filtering water used in said reprocessor, said water filtration system, comprising:

a fluid feed line connectable to a source of pressurized water;

a first filter element disposed in said fluid feed line for filtering fluids flowing therethrough; and

a second filter element disposed in said fluid feed line for filtering fluids flowing therethrough, said second filter element being downstream from said first filter element and having the capacity to filter particles smaller than said first filter element, said fluid feed line forming a fluid path for water entering said reprocessor, and defining a portion of a path for fluid circulated through said circulation system.

2. A reprocessor as defined in claim 1, wherein said filtration system includes a bypass line, wherein a portion of said fluid bypasses said first and second filter elements when fluid flows through said circulation system.

3. A reprocessor as defined in claim 1, further comprising valve means operable to isolate said first and second elements from said circulation system and from each other.

4. A reprocessor as defined in claim 1, further comprising means for determining the integrity of said first and second filter elements.

5. A reprocessor as defined in claim 4, wherein said means for determining the integrity of said first and second filter elements includes a first differential pressure sensing device operable to sense a pressure differential across said first filter element, and a second differential pressure sensing device operable to sense a pressure differential across said second filter element.

6. A reprocessor as defined in claim 5, wherein said means for determining the integrity of said first and second filter elements includes:

means for isolating each filter element from said filtration systems,

means for pressuring the upstream side of each of said isolated filter elements, and

means for determining the integrity of each filter element based upon the pressure drop across said filter elements over time.

7. A reprocessor as defined in claim 1, wherein said first and second filter elements are disposed within a single filter housing.

8. A reprocessor as defined in claim 1, wherein said first and second filter elements are disposed within separate filter housings and said second filter housing is downstream from said first filter housing.

9. A sterilizer for sterilizing items, comprising:
a sterilizing chamber for receiving items to be sterilized;
a fluid circulation system for circulating fluids through said sterilization chamber;

means for generating a liquid sterilant from dry chemical reagents by mixing water therewith;

a water filtration system for filtering water entering said sterilizer, said filtration system including:

a fluid feed line connectable to a source of pressurized water;

a first filter element in said fluid feed line; and

a second filter element in said fluid feed line, said second filter element being downstream from said first filter element and being capable of filtering smaller particles than said first filter element;

said sterilizer having a water fill phase of operation and a chemical sterilization cycle of operation wherein all water entering said sterilizer during a water fill phase passes through said fluid feed line and said first and second filter, and at least a portion of said liquid sterilant passes through said fluid feed line during said sterile processing phase.

10. A sterilizer for sterilizing items as defined in claim 9, wherein only a portion of said liquid sterilant passes through said fluid feed line during said sterile processing phase.

11. A sterilizer for sterilizing items as defined in claim 10, further comprising means for bypassing said second filter element during said sterile processing phase.

12. A sterilizer for sterilizing items as defined in claim 9, further comprising a UV treatment device for treating water from said source of pressurized water with ultraviolet radiation.

13. A sterilizer for sterilizing items as defined in claim 12, wherein said UV treatment device is outside said fluid circulation system.

14. A sterilizer for sterilizing items as defined in claim 9, further comprising means for determining the integrity of said first and second filter elements.

15. A sterilizer for sterilizing items as defined in claim 14, wherein said means for determining the integrity of said first and second filter elements includes a first differential pressure sensing device associated with said first filter element, and a second differential pressure sensing device associated with said second filter element.

16. A sterilizer for sterilizing items as defined in claim 15, wherein said means for determining the integrity of said first and second filter elements includes:

means for isolating each filter element from said filtration systems,
means for pressuring the upstream side of each of said isolated filter elements, and

means for determining the integrity of each filter element based upon the pressure drop across said filter elements over time.

17. A sterilizer for sterilizing items as defined in claim 16, wherein said means for isolating said filter elements are valves on opposite sides of said filter elements.

18. A sterilizer for sterilizing items as defined in claim 9, wherein said first and second filter elements are disposed within a single filter housing.

19. A method of operating a sterilizer having a chamber for receiving items to be sterilized, a fluid circulation system for circulating fluids through said chamber, means for generating a liquid sterilant from dry chemical reagents by mixing water therewith, and a water filtration system for filtering water entering said sterilizer, said filtration system including: a fluid feed line connectable to a source of pressurized water, a first filter element in said fluid feed line, and a second filter element in said fluid feed line, said second filter element being downstream from said first filter element and being capable of filtering smaller particles than said first filter element, said method of operating comprising the steps of:

filling said sterilizer with water by passing said water through said first and second filter elements;

generating a liquid sterilant by mixing water filtered by said first and second filter elements with said dry chemical reagents; and

directing at least a portion of said liquid sterilant through said fluid feed line and at least said first filter element during a sterile processing phase.

20. A method of operating a sterilizer as defined in claim 19, further comprising directing said sterilant through said second filter element.

21. A method of operating a sterilizer as defined in claim 19, further comprising the step of exposing said water to UV radiation before said water passes through said first and second filter elements.

22. A method of operating a sterilizer as defined in claim 19, further comprising the step of testing the integrity of said filter elements after each sterile processing phase.

23. In a reprocessor having a chamber for receiving items to be microbially deactivated or sterilized, a fluid circulation system for circulating fluids through said chamber, means for generating a microbial deactivation fluid from dry chemical reagents by mixing water therewith, and a water filtration system for filtering water entering said reprocessor, said filtration system including: a fluid feed line connectable to a source of pressurized water, a first filter element and a second filter element in said fluid feed line, said second filter element being downstream from said first filter element and being capable of filtering smaller particles than said first filter element, a method of checking the integrity of at least one of said filter elements, comprising the steps of:

a) establishing a first known pressure on the upstream side of said filter element;

b) allowing pressure on said upstream side of said filter element to dissipate through said filter element and through a leak orifice of known dimensions;

c) monitoring over time the change in pressure on the upstream side of said filter;

d) establishing a second known pressure on the upstream side of said filter element;

e) allowing pressure on said upstream side of said filter element to dissipate through said filter element;

f) monitoring over time the change in pressure on the upstream side of said filter; and

g) determining a flow rate through said filter based on the changes in pressure determined in steps c) and f).

24. A method as defined in claim 23, further comprising the step of conducting a pressurized leak test prior to step a).

25. A method as defined in claim 24, further comprising the step of conducting a test on said leak orifice prior to step a).